

9/20/05

Under the Paperwork Reduction Act

**SUPPLEMENTAL
INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known

Approved for use through 07/31/2006. OMB 0651-0031
Trademark Office, U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for Form 1449/PTO		Complete if Known	
SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>		Application Number	10/735,974
		Filing Date	12/15/2003
		First Named Inventor	E.K. Ohrner
		Art Unit	
		Examiner Name	Paula McCray
		Attorney Docket Number	1318.0
Sheet	1	of	1

Examiner Signature  **Date Considered** **10/26/05**

EXAMINER: Initial if relevance considered, whether or not citation is in conformance with MPEP 608. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments or the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

10/15/03

PTO/SB/088 (08-03)

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO				Complete If Known	
				Application Number	101735974
				Filing Date	
				First Named Inventor	E. K. Ohriner
				Art Unit	
				Examiner Name	
Sheet	1	of	1	Attorney Docket Number	1318

NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T ²
XM	1	YUN, H. M., "Effect of Composition and Microstructure on the Creep & Stress-Rupture Behavior of Tungsten Alloy Wires at 1366-1500 K," Mat.Sci. & Eng. A165, p. 65-74 (1993)			
JM	2	TSAO, B. H. et al, "Fracture-Resistant Ultralloys for Space-Power Applications: Normal-Spectral-Emissivity & Electron-Emission Studies of Tungsten, Rhenium, Hafnium-Carbide Alloys at Elevated Temperatures," Engineering Fracture Mechanics, Vol. 35, No. 6, pp. 1049-1059 (1990)			
JM	3	LUO, A. et al "Hafnium Carbide Strengthening in a Tungsten-Rhenium Matrix at Ultrahigh Temperatures," Acta Metall.Mater. Vol. 40, No. 9, pp. 2225-2232 (1992)			
JM	4	KLOPP, W. D. et al, "Mechanical Properties of Arc-Melted Tungsten-Rhenium-Hafnium-Carbon Alloys," NASA Technical Note NASA TN D-5348, National Aeronautics & Space Administration Washington, D. C., (July 1969)			

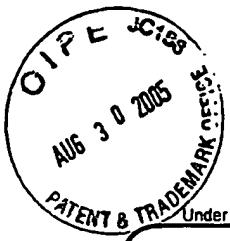
Examiner Signature	JM	Date Considered	10/26/05
--------------------	----	-----------------	----------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



8/30/05

PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
or a collection of information unless it contains a valid OMB control number.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**SUPPLEMENTAL
INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 2

<i>Complete if Known</i>	
Application Number	10/735,974
Filing Date	12/15/2003
First Named Inventor	E.K. Ohriner
Art Unit	
Examiner Name	Paula McCray
Attorney Docket Number	1318.0

U. S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	FOREIGN PATENT DOCUMENTS		Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Foreign Patent Document Country Code ² -Number ³ -Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY			
JM	2	02030774	02-01-1990	K. Yoshihisa		
JM	3	3002346811	12-04-2002	K. Naohiro		

Examiner Signature		Date Considered	10/26/05
--------------------	---	-----------------	----------

¹EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ²Applicant's unique citation designation number (optional). ³See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ⁴Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁵For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁶Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁷Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 USC. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

8/30/05

PTO/SB/08B (08-03)

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**SUPPLEMENTAL
INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	10/735,974
Filing Date	12/15/2003
First Named Inventor	E.K. Ohriner
Art Unit	
Examiner Name	Paula McCray

Sheet

2

of

2

Attorney Docket Number

1318.0

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
<i>JM</i>	4	H.M. YUN, "Preliminary Evaluation of Tensile and Stress-Rupture Behavior of W + 24 At. Pct RE + 0.4 At. Pct HfC Wire," Metallurgical Transitions A, 1993, pp. 209-214, Vol 24A.	
<i>JM</i>	5	J.J. PARK, "Formation of Subgrains in tungsten-rhenium-hafnium carbide alloys during creep," J of Materials Science Letters, 1999, pp. 273-275, Vol 18.	
<i>JM</i>	6	W.D. KLOPP, "Mechanical Properties of a Tungsten-23.4 Percent Rhenium-0.27 Percent Hafnium-Carbon Alloy, J Less-Common Metals, 1971, pp. 427-443, Vol. 24.	
<i>JM</i>	7	H.P. GAO, "Effects of rhenium on creep resistance in tungsten alloys," J of Materials Science Letters, 2001, pp. 885-887, Vol. 20.	

Examiner Signature	<i>Paula McCray</i>	Date Considered	10/26/105
--------------------	---------------------	-----------------	-----------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.